

**Amendment and Response**

Serial No.: 10/734,717

Confirmation No.: 2357

Filed: 12 December 2003

For: VARIABLE VALVE APPARATUS AND METHODS

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**Remarks**

The Office Action mailed 10 August 2005 has been received and reviewed. Claim 13 is amended, leaving claims 1-22 pending. Reconsideration and withdrawal of the rejections are respectfully requested.

**The 35 U.S.C. §112, Second Paragraph, Rejection**

The Examiner rejected claims 1-22 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

It was asserted that the terms "valved" and "valve" are confusing as used. "The term 'valve' is not consistent with its regular meaning. After all, valves are reusable, and the disclosed creation of an opening in the wall 64 is not." *Office Action*, p. 2. Applicants respectfully submit that this reasoning is insufficient to support a rejection under § 112, second paragraph.

The proper standard to apply in assessing a claim under 35 U.S.C. § 112, second paragraph, is whether the claim as a whole "apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent." M.P.E.P. §2173.02, p. 2100-213 (8th Ed., Rev. 3, August 2005).

The reasoning presented as to why the use of the terms "valve" and "valved" in the claims does not meet the requirements of § 112, second paragraph is that "valves are reusable". This assertion is coupled with the implication that a structure that cannot be both opened and closed cannot be a valve and, further, that the use of such a term in connection with a structure that cannot be both opened and closed would confuse one of ordinary skill in the art to such an extent as to fail to provide clear warning as to what structures/methods would infringe the pending claims.

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Applicants respectfully disagree. In fact, the art cited in the rejections under 35 U.S.C. §§ 102 & 103 also uses the terms "valve" and "valved" in manners that are consistent with the use of those terms in the present claims. As a result, it is clear that the use of those terms would not render the claims indefinite to those of ordinary skill in the art.

With regard to the use of the phrase "first and second major sides" as recited in claim 1, it appears that the Examiner is erroneously applying the modifier "first" only to "sides" and not to "major sides" as would be grammatically correct. Applicants submit that claim 1 does meet the requirements for § 112, second paragraph and that no legally sufficient reasoning has been provided as to why one of ordinary skill in the art would not understand that the devices have both a first major side and a second major side.

Finally, it is alleged that, with respect to claim 13, "the detection window" (lines 7-8 from bottom of the claim) lacks antecedent basis. Applicants have amended claim 13 to address the issue and submit that amended claim 13 does meet the requirements of § 112, second paragraph.

Furthermore, the amendments to claim 13 are not narrowing, but are, instead, a rearrangement of the order in which the elements are recited.

For at least the above reasons, Applicants respectfully submit that claims 1-22 do meet the requirements of § 112, second paragraph. Reconsideration and withdrawal of the rejection of claims 1-22 are, therefore, respectfully requested.

**The 35 U.S.C. §102 Rejection**

Claims 1-3, 5, 8, 14, 16, 17, and 20 were rejected under 35 U.S.C. §102(b) as being anticipated by Godec et al. (U.S. Patent No. 5,976,468). This rejection and the assertions made in support thereof are respectfully traversed.

In support of the rejection it is asserted in the Office Action that Godec et al. teaches a "process chamber 90 having a volume between the right and left hand external walls of 'rectangular' (col. 6, line 44) housing 10" and a "valve chamber located between the process

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chamber volume 90 and the left hand side of the processing device, whereing (*sic*) the valve chamber is isolated from the process chamber by a septum 94 separating the valve chamber and the process chamber, and where a portion of the process chamber volume lies between the septum 94 and the right hand external wall."

Independent claim 1, recites, *inter alia*, that "a portion of the process chamber volume lies between the valve septum and a first major side of the sample processing device." Applying the asserted interpretation of Godec et al., however, reveals that no portion of the alleged process chamber (90) is located between the septum (94) and the first major side of the device (the right hand side of housing (10) in Figures 1 & 2).

With respect to independent method claim 14 and its dependent claims 16, 17, and 20, Applicants note that Godec et al. does not teach, e.g., "detecting a characteristic of the sample material in the process chamber through the detection window." Nor does Godec et al. teach "forming an opening in the valve septum at a selected location along the length of the process chamber, wherein the selected location is correlated to the detected characteristic of the sample material." Further, the Office Action provides no assertions as to where or how Godec et al. teaches the missing elements.

For at least these reasons, Applicants submit that Godec et al. cannot support and anticipation rejection of independent article claim 1 and its dependent claims 2, 3, 5, and 8, or the rejection of independent method claim 14 and its dependent claims 16, 17, and 20.

Reconsideration and withdrawal of the rejection are, therefore, respectfully requested.

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### The 35 U.S.C. §103 Rejections

Claims 1-18, 20, and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Parthasarathy et al. (U.S. Patent Publication No. 2003/0138779) in view of Kellogg (U.S. Patent No. 6,063,589). This rejection is respectfully traversed.

Applicants will address this rejection on the merits, but do expressly reserve the right to remove the Parthasarathy et al. reference from consideration as prior art in the future.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations. *See* M.P.E.P. § 2143.

With respect to independent article claims 1 and 13 (and dependent claims 2-12), Applicants note that the Office Action does not identify any suggestion or motivation as to why or how one of ordinary skill in the art would modify the process chambers of Parthasarathy et al. to meet the recited limitation that the process chambers have a length greater than their width. In the absence of any discussion as to why or how one of ordinary skill in the art would modify the cited references to meet claims 1-13, a *prima facie* case of obviousness has not been established.

For at least this reason, Applicants respectfully submit that a *prima facie* case of obviousness has not been established for article claims 1-13. Reconsideration and withdrawal of the rejection of those claims are, therefore, respectfully requested.

Regarding method claims 14-18, 20 and 21, Applicants note that the shortcoming identified above with respect to independent article claim 1 applies equally to method claims 14-18, 20 and 21 (which recite the use of a process chamber with a length greater than its width).

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In addition, no discussion has been provided in support of the rejection of claims 14-18, 20 and 21 as to why or how one of ordinary skill in the art would modify and/or combine the methods of the cited references to include, e.g., "detecting a characteristic of the sample material in the process chamber through the detection window" or "forming an opening in the valve septum at a selected location along the length of the process chamber, wherein the selected location is correlated to the detected characteristic of the sample material." Both of these actions are recited in independent claim 14 and its dependent claims 15-18, 20 and 21.

In the absence of any discussion as to why or how one of ordinary skill in the art would modify the methods of the cited references to meet the invention of claims 14-18, 20 and 21, a *prima facie* case of obviousness has not been established with respect to these claims.

For at least this reason, Applicants respectfully submit that a *prima facie* case of obviousness has not been established for method claims 14-18, 20 and 21. Reconsideration and withdrawal of the rejection of those claims are, therefore, respectfully requested.

Claim 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Godec et al. Applicants respectfully traverse this rejection.

Claim 21 depends from independent method claim 14. Applicants noted above with respect to the anticipation rejection of independent method claim 14 that Godec et al. does not teach, e.g., "detecting a characteristic of the sample material in the process chamber through the detection window." Nor does Godec et al. teach "forming an opening in the valve septum at a selected location along the length of the process chamber, wherein the selected location is correlated to the detected characteristic of the sample material." Further, the Office Action provides no assertions as to why or how one of ordinary skill in the art would modify the teachings of Godec et al. to include the missing elements as would be required for a *prima facie* case of obviousness.

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For at least these reasons, Applicants submit that Godec et al. alone cannot support a case of *prima facie* case of obviousness with respect to claim 21. Reconsideration and withdrawal of this rejection are, therefore, respectfully requested.

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**Summary**

It is respectfully submitted that the pending claims 1-22 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted by

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12 Dec. 2005

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**CERTIFICATE UNDER 37 CFR §1.8:**

The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 12<sup>th</sup> day of December, 2005, at 2:27 p.m. (Central Time).

By: Rachel Gaspard  
Name: Rachel Gaspard